



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,907	09/22/2003	Sung Oh II	2336-203	6802

7590 01/09/2006

LOWE HAUPTMAN GOPSTEIN GILMAN & BERNER, LLP
Suite 310
1700 Diagonal Road
Alexandria, VA 22314

EXAMINER

RONESI, VICKEY M

ART UNIT	PAPER NUMBER
----------	--------------

1714

DATE MAILED: 01/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/664,907		OH, SUNG	
	Examiner		Art Unit	
	Vickey Ronesi		1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 6-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 9-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>9/8/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1714

DETAILED ACTION

1. The objections to the specification and claims are withdrawn in light of applicant's amendment filed 10/24/2005.
2. The 35 USC 112(2) rejections are withdrawn in light of applicant's amendment filed 10/24/2005, however, the amendment added new matter and thus a 35 USC 112(1) rejection is given below.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.
4. The new grounds of rejection set forth below are necessitated by applicant's amendment filed 10/24/2005. In particular, claims 9-13 are new. Thus, the following action is properly made final.

Drawings

5. The drawings were received on 10/24/2005. These drawings are accepted.

Specification

6. The substitute specification is entered, however, it contains new matter. In particular, there is no support for the term "weight-average molecular weight" in the specification as originally filed.

Thus, the amendment filed 10/24/2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention.

Art Unit: 1714

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-5 and 9-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to claims 1 and 2, they have been amended to recite that the molecular weight is “a weight-average molecular weight.” It is the examiner’s position that this term fails to satisfy the written description requirement of 35 USC 112, first paragraph since there does not appear to be a written description requirement of the term “weight-average molecular weight” in the application as originally filed, *In re Wright*, 866 F.2d 422, 9 USPQ2d 1649 (Fed. Cir. 1989) and MPEP 2163. Applicant has not pointed to any portion of the specification, and examiner has not found any support for this phraseology in the specification as originally filed. While there is support for “average molecular weight” on page 5, line 11 of the specification as cited by the applicant, there is no support for weight-average molecular weight.

With respect to claims 3-5 and 9-13, they are rejected for being dependent on a rejected claim.

Art Unit: 1714

Claim Rejections - 35 USC § 102/103

8. Claims 1, 3, 4, and 5 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Simpson (US 4,379,109).

The rejection is adequately set forth in paragraph 5 of Office action mailed 7/22/2005 and is incorporated here by reference.

Claim Rejections - 35 USC § 103

9. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson (US 4,379,109).

The rejection is adequately set forth in paragraph 6 of Office action mailed 7/22/2005 and is incorporated here by reference. The rejection is also adequate to cover new claim 9.

10. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson (US 4,379,109) in view of Pieterse et al (US 5,268,415).

The discussion with respect to Simpson in paragraphs 8 and 9 above is incorporated here by reference.

While Simpson discloses the use of plasticizer solvents such as glycols to facilitate the dispersion of the ceramic material, decrease the viscosity of the mixture and mixing required, and improves the flexibility of the green sheet (col. 3, lines 33-43), it fails to teach other solvents like presently claimed.

Pieterse et al discloses a green sheet slurry containing a higher molecular weight (at least Mw of 400,000) and teaches the use of various solvents such as paraffins, decahydronaphthalene,

Art Unit: 1714

tetrahydronaphthalene, naphthalene, toluene, and xylene to prepare the green sheets (col. 2, lines 10-23).

Given that Pieterse et al teaches the use of suitable solvents which behave as a plasticizer in a composition to prepare green sheets, it would have been obvious to one of ordinary skill in the art to utilize one of the solvents of Pieterse et al in the green sheet composition of Simpson and thereby arrive at the presently cited claims.

Response to Arguments

11. Applicant's arguments filed 10/24/2005 have been fully considered but they are not persuasive. Specifically, applicant argues (A) that the examiner has not established how the claimed wt % necessarily flows from the vol % teachings of Simpson; (B) that Simpson is non-analogous art; (C) that it not obvious to obtain the presently claimed wt % amounts from the disclosure of Simpson; (D) that the molecular weight of the second polyethylene is not a result effective variable; (E) that amended the composition is used to produce a thin green sheet by extruding the composition into an extruded sheet and stretching the extruded sheet, which is not taught by Simpson; (F) that Simpson does not disclose or suggest the effect of the claimed combination of high and low molecular weight polymer; and (G) that Simpson only discloses that its high molecular weight polymer has a molecular weight of at least 150,000 and not the presently claimed at least 400,000.

With respect to argument (A), the rejection made was under both 102 and 103 to account for the fact that Simpson does not explicitly disclose amounts in wt %. Regardless, it was

Art Unit: 1714

considered by the examiner that the amounts were implicitly disclosed by Simpson given the breadth of the vol % ranges taught.

With respect to argument (B), first, note that it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Simpson is pertinent since it discloses the presently claimed composition. Second, to the issue of classification raised in applicant's arguments, note that the current classification of Simpson is 156/89.22 and not in class 264. Even if Simpson were classified in 264/60, the restriction would still be maintained given that the different groups contain divergent subject matter.

With respect to argument (C), given that Simpson discloses overlapping amounts of ingredients, the examiner maintains that it would have obvious to one of ordinary skill in the art to utilize any amount taught by Simpson, including those presently claimed. Simpson discloses those amounts with the expectation of similar effects and thus that fall within Simpson's range would be obvious to use. Furthermore, applicant has only given conclusory statements regarding the criticality of the presently claimed amounts and fails to show the criticality for the presently claimed amounts.

With respect to argument (D), Simpson specifically says that "depending upon the desired physical properties of the final product, the high molecular weight polyethylene can be blended with standard commercial lower molecular weight polyethylene, to the extent that a too low overall molecular weight of the blend and consequent brittleness of the green sheet are

Art Unit: 1714

avoided” (col. 3, lines 9-15). Thus, Simpson explicitly teaches that it would be well within the capabilities of one of ordinary skill in the art to utilize a suitable relatively low molecular weight. It is also clear that the molecular weight of the high molecular weight polyethylene is at least 150,000 (col. 3, line 3) and therefore a relatively low molecular weight polyethylene would be less than 150,000.

With respect to argument (E), case law holds that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). There is no suggestion in the prior art or evidence by the applicant that shows that the composition could not perform the presently claimed intended use.

With respect to argument (F), although Simpson uses the combination of high and low molecular weight polymer in a different capacity than applicant, case law holds that it “does not alter the conclusion that its use in a prior art composition would have been *prima facie* obvious from the purpose disclosed in the reference.” *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972).

With respect to argument (G), Simpson teaches an amount of at least 150,000 which clearly overlaps in scope with the presently claimed molecular weight of at least 400,000.

Art Unit: 1714

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Contact Information

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vickey Ronesi whose telephone number is (571) 272-2701. The examiner can normally be reached on Monday - Friday, 8:30 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications


Art Unit: 1714

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

1/3/2006

vr




VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700